F06F20'80260660

FIG. 1A

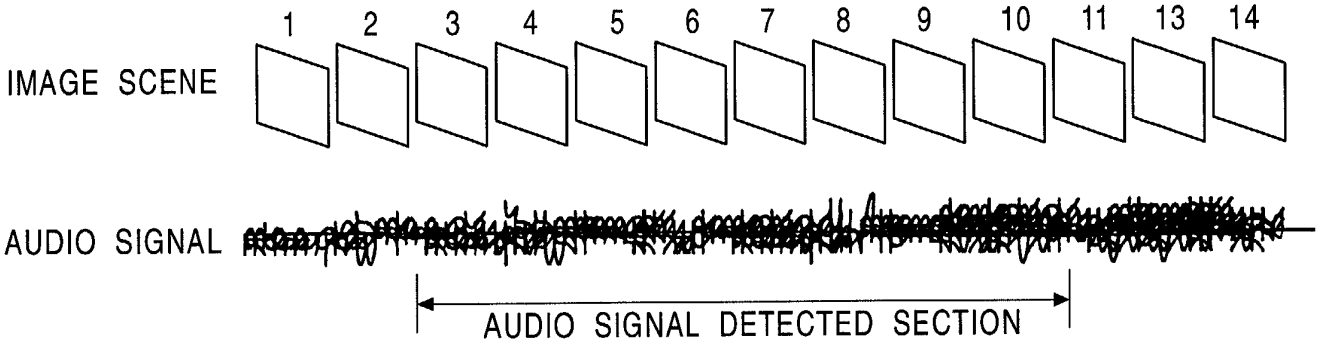
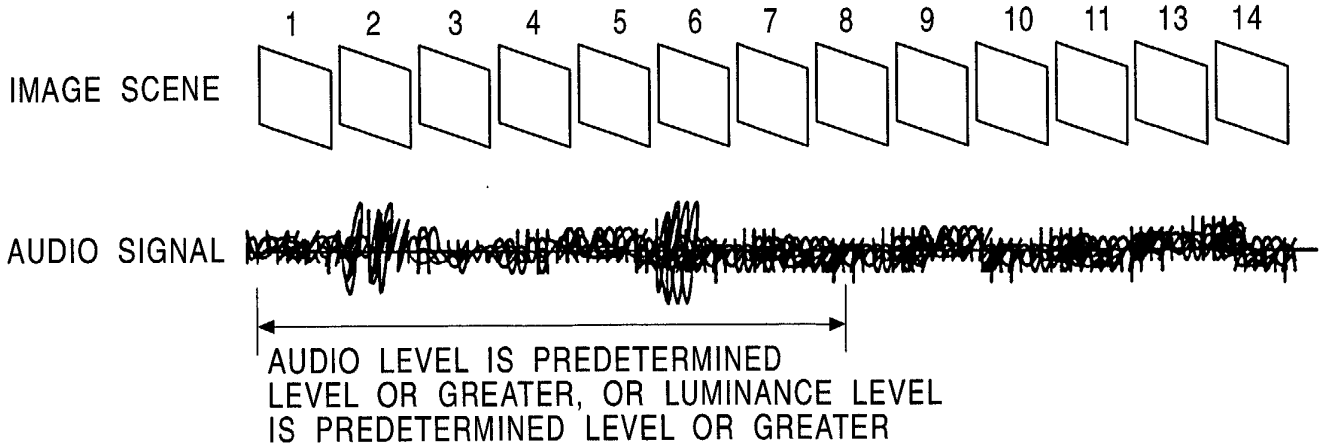


FIG. 1B



Solphin

FIG. 2A

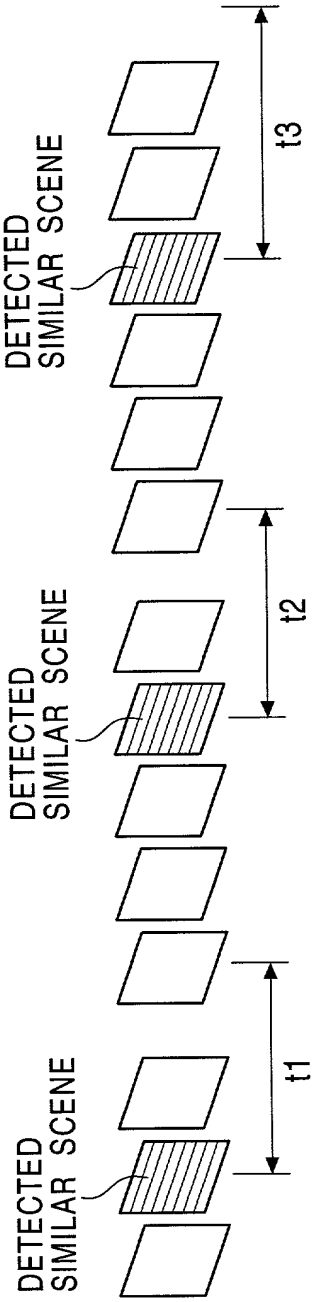

DETECTED SIMILAR SCENE
DETECTED SIMILAR SCENE
DETECTED SIMILAR SCENE
t1
t2
t3

FIG. 2B

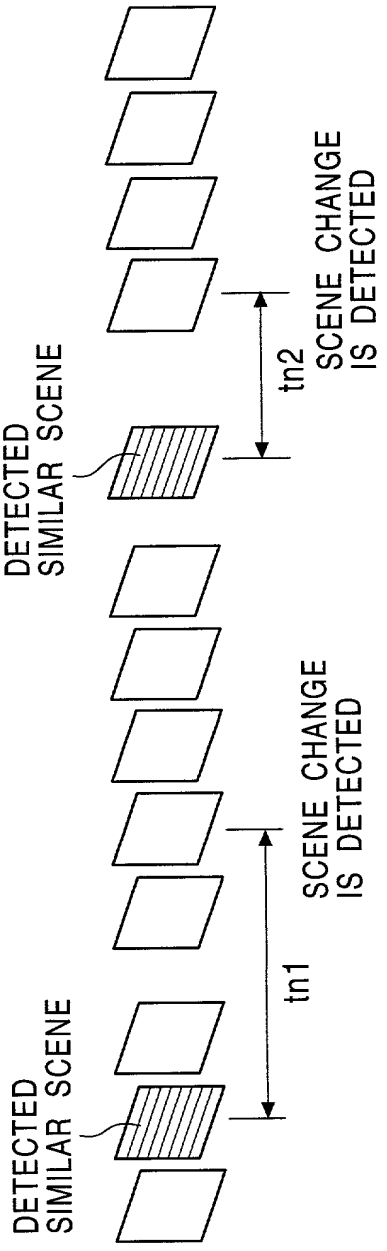

DETECTED SIMILAR SCENE
DETECTED SIMILAR SCENE
tn1
SCENE CHANGE IS DETECTED
tn2
SCENE CHANGE IS DETECTED

FIG. 3

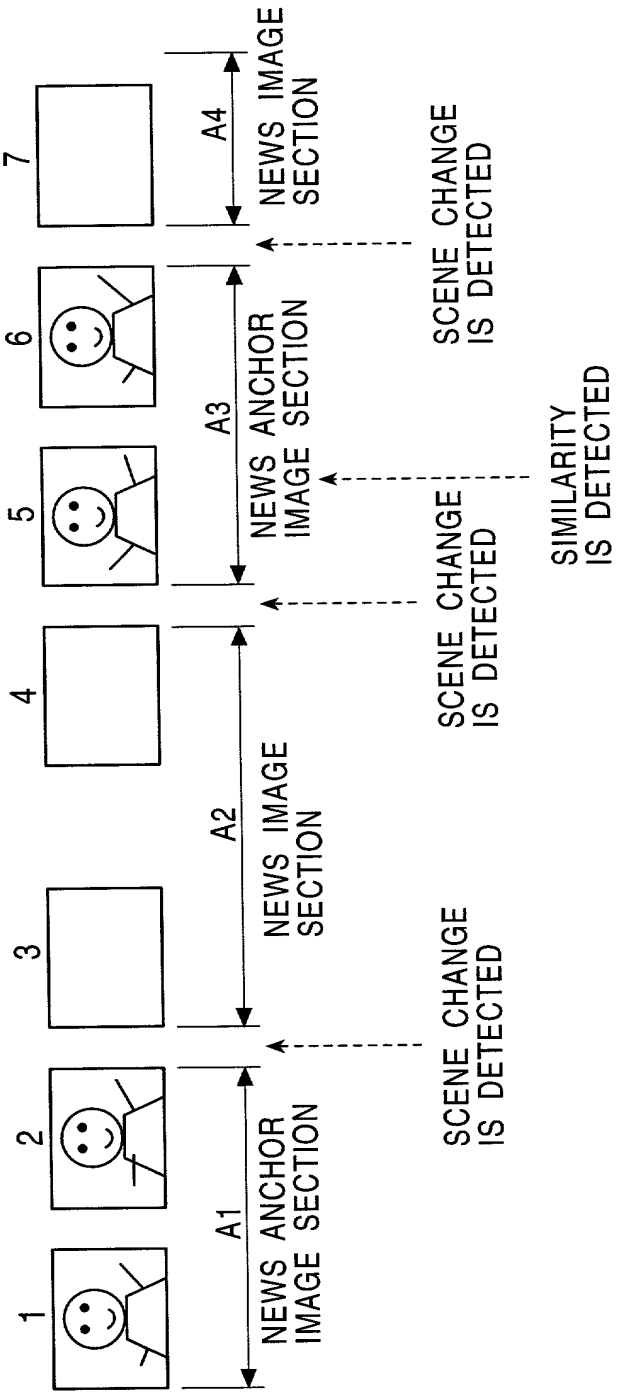

1
2
3
4
5
6
7
A1
A2
A3
A4
NEWS ANCHOR IMAGE SECTION
NEWS IMAGE SECTION
NEWS ANCHOR IMAGE SECTION
NEWS IMAGE SECTION
SCENE CHANGE IS DETECTED
SCENE CHANGE IS DETECTED
SIMILARITY IS DETECTED
SCENE CHANGE IS DETECTED

FIG. 4A

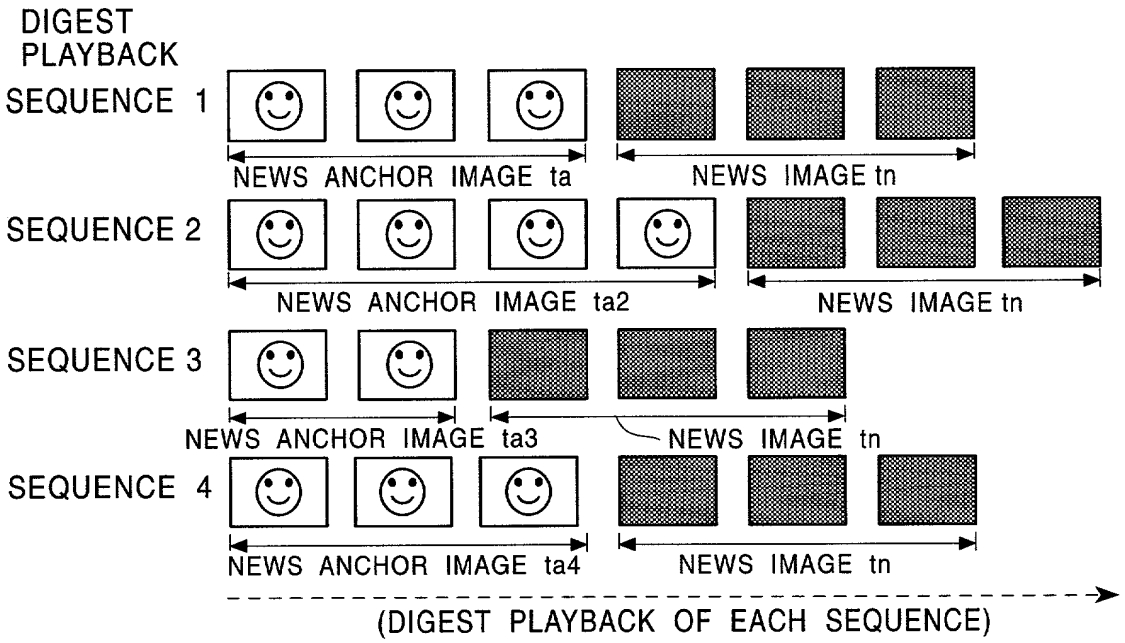

DIGEST PLAYBACK
SEQUENCE 1
NEWS ANCHOR IMAGE ta
NEWS IMAGE tn
SEQUENCE 2
NEWS ANCHOR IMAGE ta2
NEWS IMAGE tn
SEQUENCE 3
NEWS ANCHOR IMAGE ta3
NEWS IMAGE tn
SEQUENCE 4
NEWS ANCHOR IMAGE ta4
NEWS IMAGE tn
(DIGEST PLAYBACK OF EACH SEQUENCE)

FIG. 4B

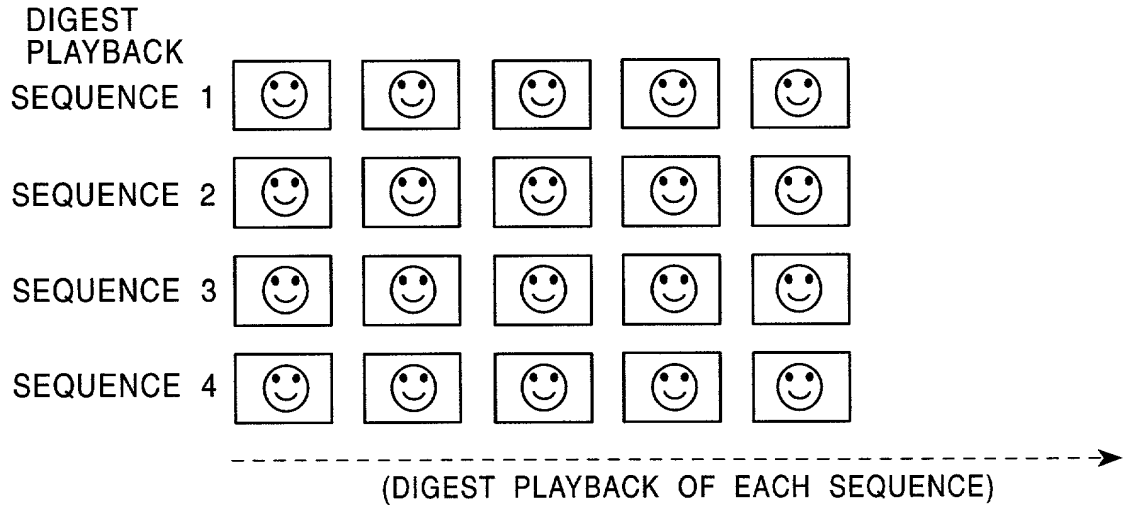
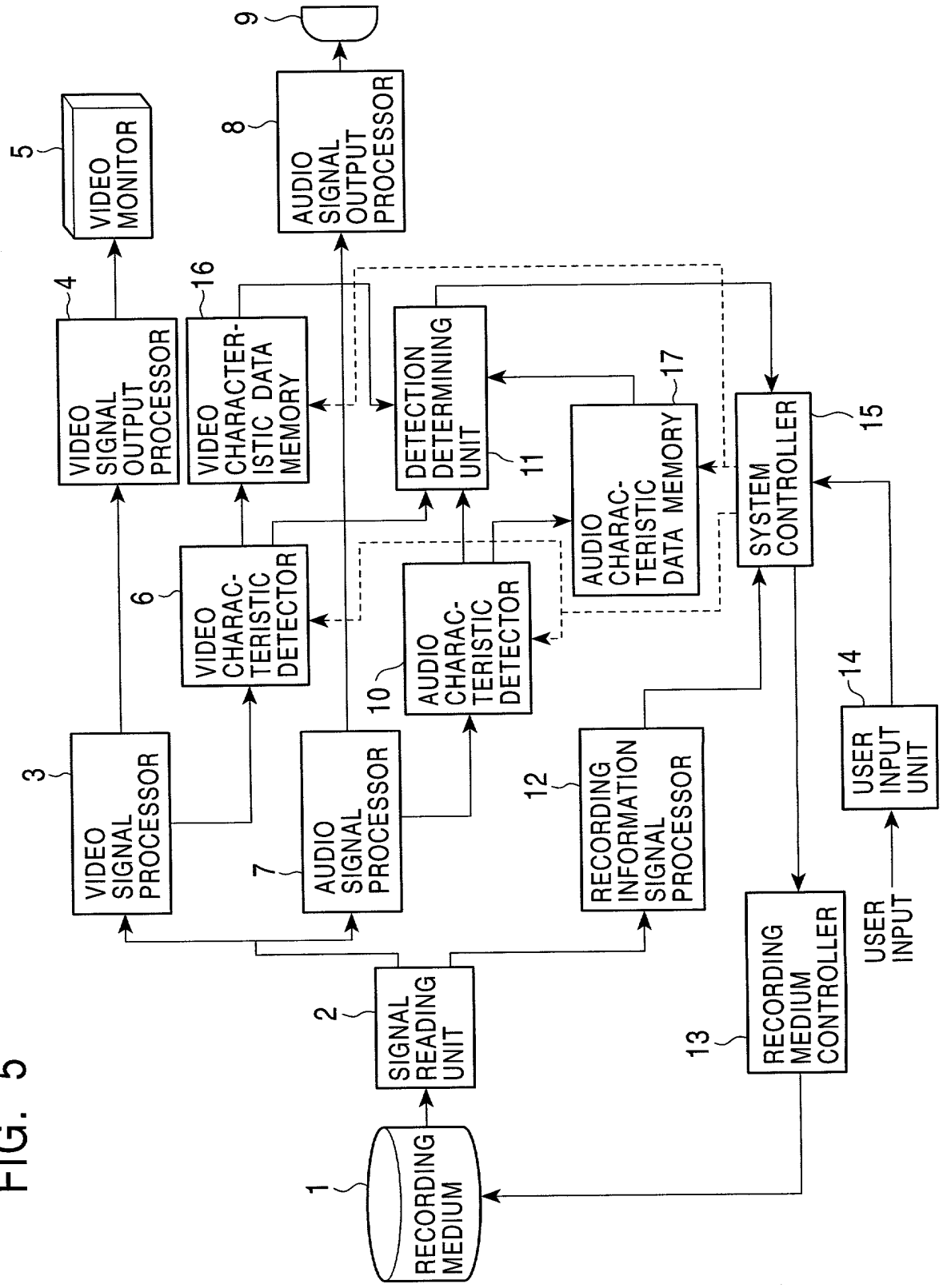

DIGEST PLAYBACK
SEQUENCE 1
SEQUENCE 2
SEQUENCE 3
SEQUENCE 4
(DIGEST PLAYBACK OF EACH SEQUENCE)

FIG. 5


RECORDING MEDIUM
1
SIGNAL READING UNIT
2
VIDEO SIGNAL PROCESSOR
3
VIDEO SIGNAL OUTPUT PROCESSOR
4
VIDEO MONITOR
5
VIDEO CHARAC-TERISTIC DETECTOR
6
AUDIO SIGNAL PROCESSOR
7
AUDIO SIGNAL OUTPUT PROCESSOR
8
9
AUDIO CHARAC-TERISTIC DETECTOR
10
DETECTION DETERMINING UNIT
11
RECORDING INFORMATION SIGNAL PROCESSOR
12
RECORDING MEDIUM CONTROLLER
13
USER INPUT UNIT
14
SYSTEM CONTROLLER
15
VIDEO CHARACTER-ISTIC DATA MEMORY
16
AUDIO CHARAC-TERISTIC DATA MEMORY
17
USER INPUT

EP1470690

FIG. 6

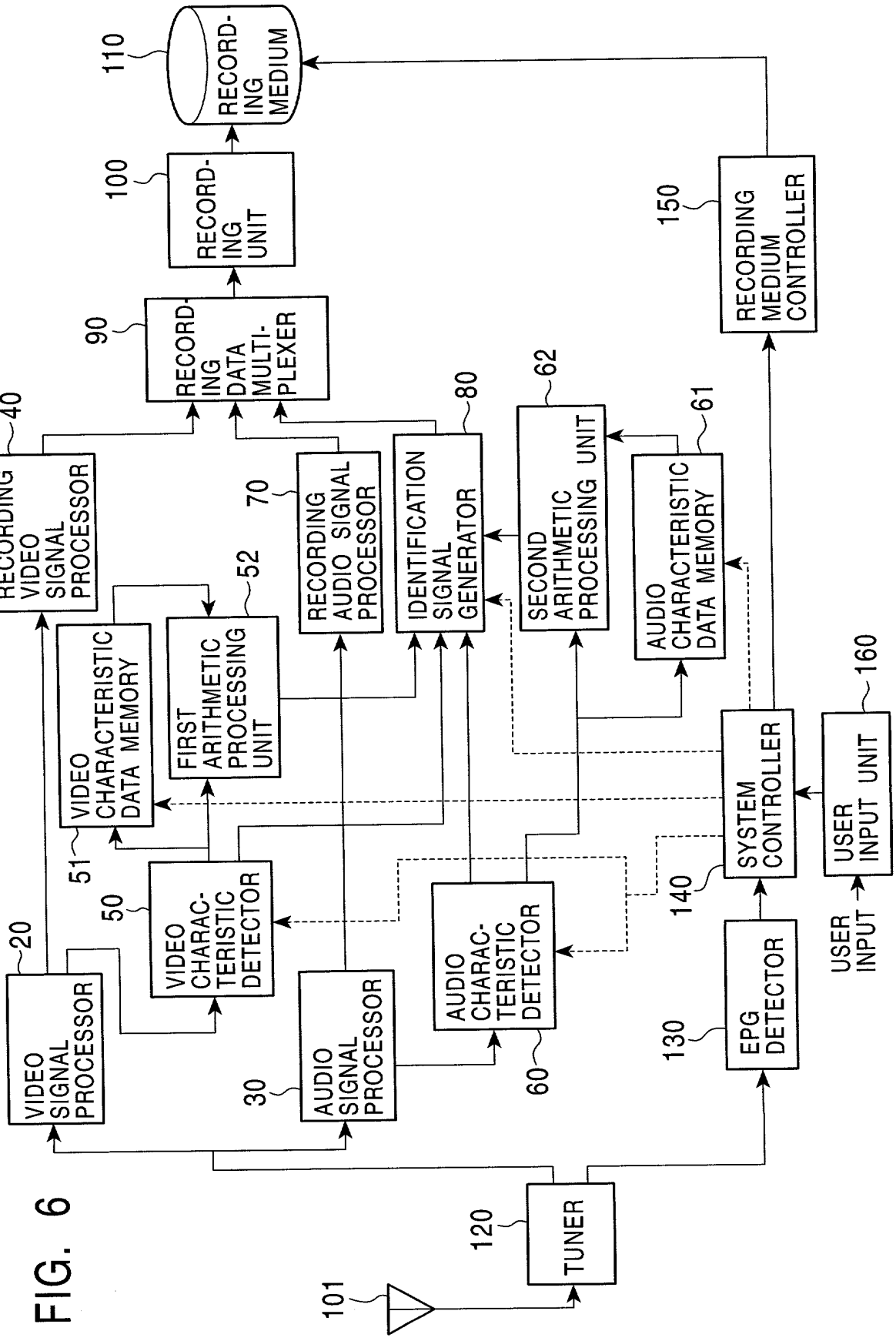


FIG. 7

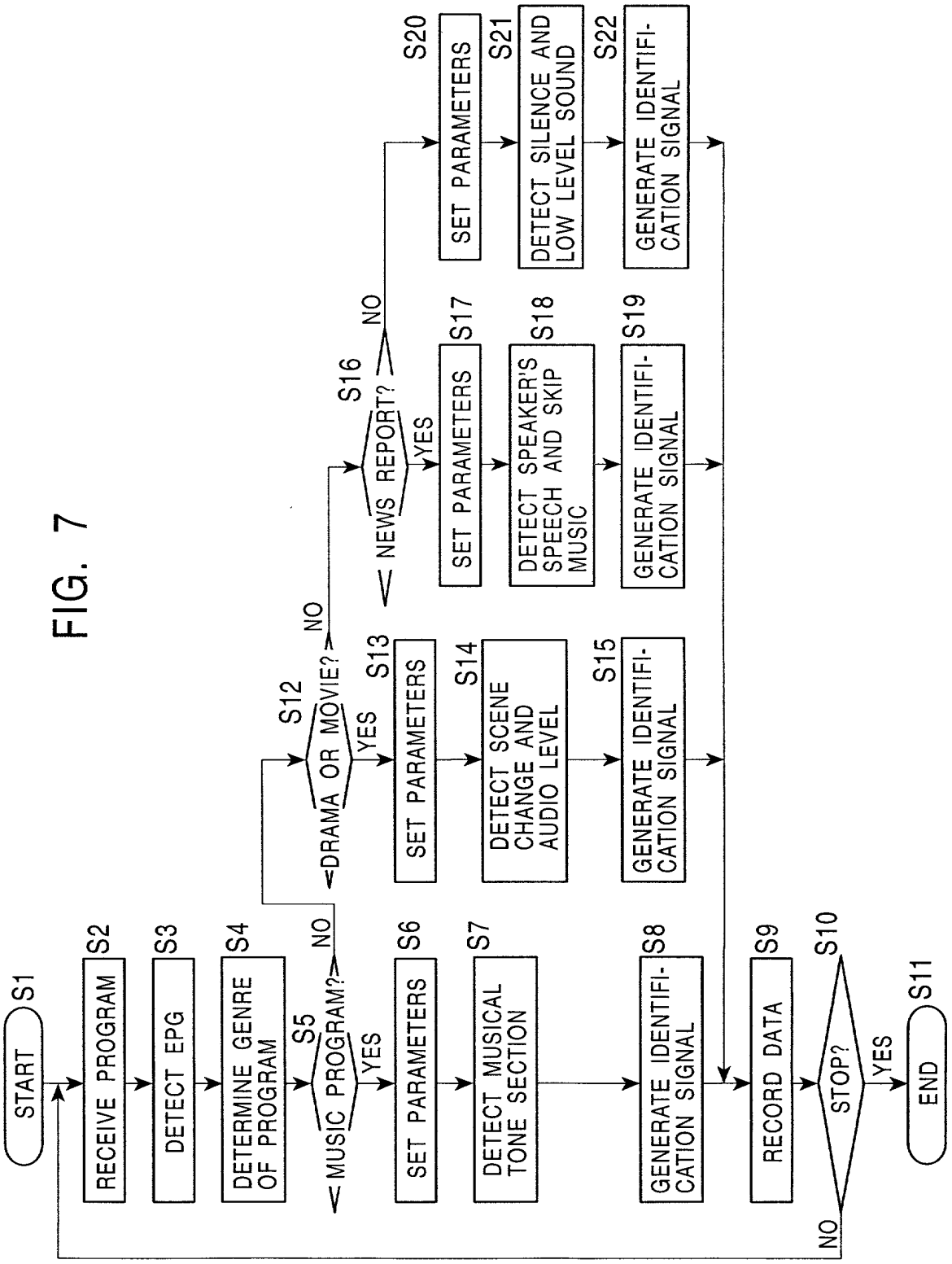
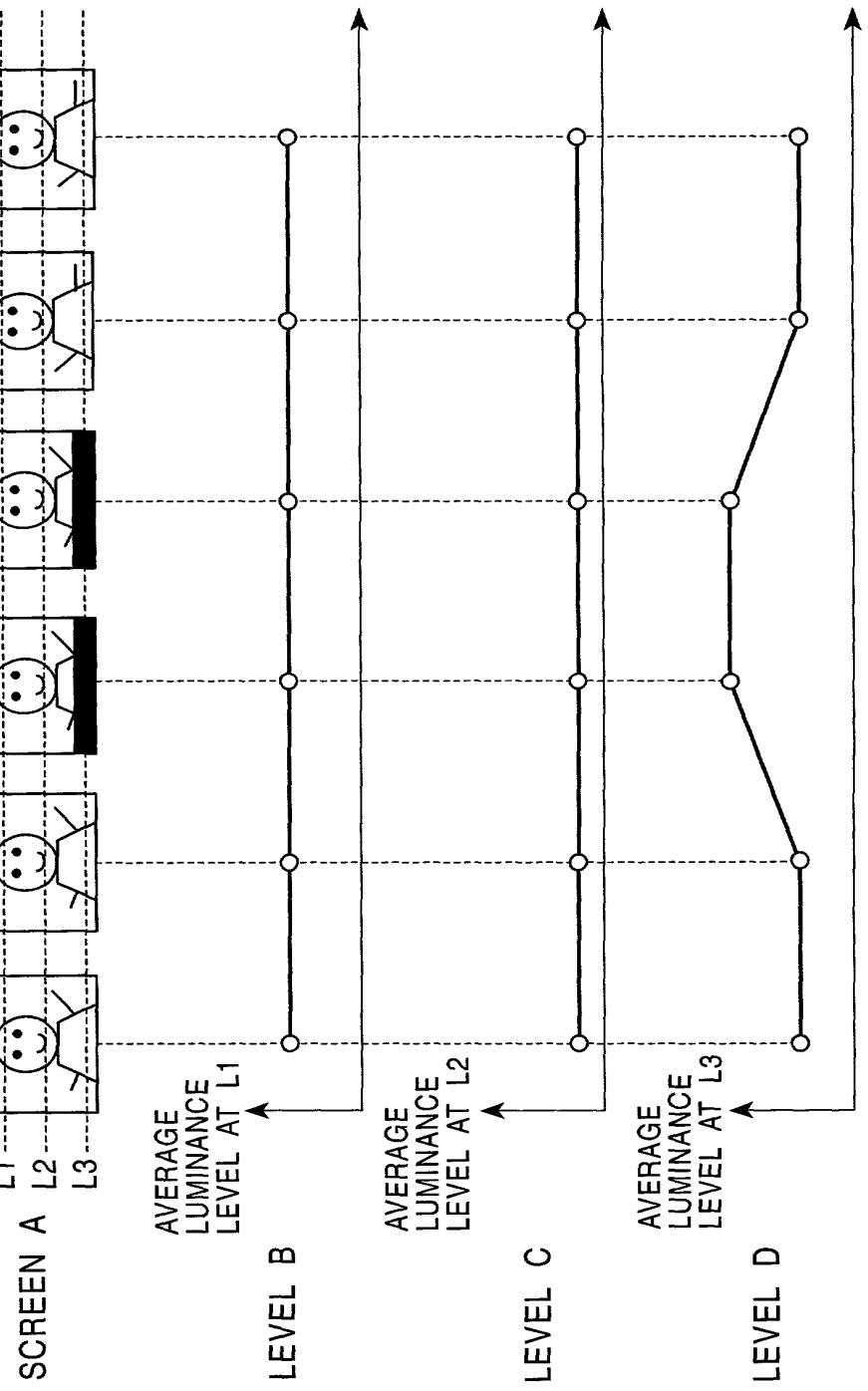

START
S1
RECEIVE PROGRAM
S2
DETECT EPG
S3
DETERMINE GENRE OF PROGRAM
S4
MUSIC PROGRAM?
S5
NO
YES
SET PARAMETERS
S6
DETECT MUSICAL TONE SECTION
S7
GENERATE IDENTIFICATION SIGNAL
S8
DRAMA OR MOVIE?
S12
NO
YES
SET PARAMETERS
S13
DETECT SCENE CHANGE AND AUDIO LEVEL
S14
GENERATE IDENTIFICATION SIGNAL
S15
NEWS REPORT?
S16
NO
YES
SET PARAMETERS
S17
DETECT SPEAKER'S SPEECH AND SKIP MUSIC
S18
GENERATE IDENTIFICATION SIGNAL
S19
SET PARAMETERS
S20
DETECT SILENCE AND LOW LEVEL SOUND
S21
GENERATE IDENTIFICATION SIGNAL
S22
RECORD DATA
S9
STOP?
S10
NO
YES
END
S11

FIG. 8

GENRE (FIELD)	PREFERRED DETECTION PARAMETER	PURPOSE		EXAMPLE OF DETECTION METHOD
		PLAY	PLAY AND SKIP	
MUSIC PROGRAM	MUSICAL TONE	○		FFT INTERMITTENCE ANALYSIS
	LOW AUDIO LEVEL SECTION		○	ANALYSIS OF AVERAGE AUDIO LEVEL IN PREDETERMINED SECTION
DRAMA AND MOVIE PROGRAM	SCENE CHANGE	○		IMAGE DIFFERENTIAL PROCESS
	PREDETERMINED HIGH AUDIO LEVEL SECTION	○		ANALYSIS OF AVERAGE AUDIO LEVEL IN PREDETERMINED SECTION
NEWS REPORT PROGRAM	SPEAKER AUDIO SECTION	○		FILTERING, FFT ANALYSIS
	MUSICAL TONE SECTION		○	FFT CONNECTIVITY ANALYSIS
	TELOP	○		IMAGE TELOP DETECTION
SPORTS PROGRAM	PREDETERMINED HIGH AUDIO LEVEL SECTION	○		ANALYSIS OF AVERAGE AUDIO LEVEL IN PREDETERMINED SECTION
	PREDETERMINED COLOR SECTION	○		COLOR SIGNAL ANALYSIS
COOKING AND INFORMATIVE PROGRAM	TELOP	○		IMAGE TELOP DETECTION

FIG. 9


1
2
3
4
5
6
L1
L2
L3
SCREEN A
AVERAGE LUMINANCE LEVEL AT L1
LEVEL B
AVERAGE LUMINANCE LEVEL AT L2
LEVEL C
AVERAGE LUMINANCE LEVEL AT L3
LEVEL D